

**Claims:**

1. Pyrogenically produced silica powder characterised in that it has
  - a BET surface of 30 to 90 m<sup>2</sup>/g,
  - a DBP number of at least 80, expressed as g of dibutyl phthalate/100 g of silica and
  - a tamped density of no more than 110 g/l.
- 5 2. Silica powder according to claim 1, characterised in that the average aggregate circumference is at least 1000 nm.
- 10 3. Silica powder according to claims 1 or 2, characterised in that the kurtosis of the aggregate area is at least 20.
- 15 4. Silica powder according to claims 1 to 3, characterised in that it has a pH value, measured in a 4 per cent aqueous dispersion, of between 3.8 and 5.
- 5 20 5. Pyrogenically produced silica powder according to claims 1 to 4, characterised in that
  - the BET surface is 35 to 55 m<sup>2</sup>/g,
  - the DBP number is 100 to 130 g dibutyl phthalate/100 g silicon dioxide,
  - and the pH value, measured in a 4% aqueous dispersion, is 4.3 to 4.8.
- 25 6. Process for the production of the silica powder according to claims 1 to 5, characterised in that at least one vaporous silicon compound, a gas containing free oxygen (primary air) and a combustible gas are mixed together in a closed burner and then burnt in a flame in the flame tube of the burner, the solid obtained is separated from the gas mixture and optionally purified, wherein
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- the oxygen content of the gas containing free oxygen is adjusted such that the lambda value is greater than or equal to 1, and
  - the gamma value is between 1.2 and 1.8.
- 5 . 7. Process according to claim 6, characterised in that  $1 \leq \text{lambda} \leq 1.2$ .
8. Process according to claims 6 or 7, characterised in that, in addition, secondary air is introduced into the flame tube, secondary air/primary air being  $\leq 1.1$ .
- 10 9. Process according to claims 6 to 8, characterised in that the proportion of oxygen in the gas containing free oxygen is between 30 and 40 vol.%.
10. Process according to claims 6 to 9, characterised in that silicon halides, organochlorosilicon compounds or
- 15 organosilicon compounds and mixtures of the above compounds are used as the silicon compound.
11. Process according to claims 6 to 10, characterised in that  $1 \leq \text{lambda} \leq 1.2$ ,  $1.2 \leq \text{gamma} \leq 1.8$ , the ratio of secondary air / primary air is  $\leq 1.1$  and the proportion of oxygen in the gas containing free oxygen is between 30 and 40 vol.% and the silicon compound is silicon tetrachloride.
- 20 12. Use of the silica powder according to claims 1 to 5 for toner applications, in the silicone and rubber industry, to adjust the rheology of liquid systems, for the production of dispersions, as a filler, for the film-coating of polyethylene terephthalate and polyvinyl acetate, in lacquers and paints.
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